

R E M A R K S

Claims 1, 2, 8 to 10, 13, 14, 16 and 18 to 20 as set forth in Appendix I of this paper are now pending in this case. Claims 4 to 7, 12, 15 and 17 have been canceled, Claims 1, 2, 8, 9, 14, 16, 18 and 19 have been amended, and Claims 20 and 21 have been added as indicated.

In addition to editorial changes in the claims, applicants have replaced the wording "adjustable to" by --of--<sup>1)</sup>, and have replaced the lower heat input level value "12,000" by the value of --11,864-- which is disclosed for Example 3 in the table on page 57 of the application<sup>2)</sup>. Correspondingly, where the claims referenced a lower heat input level value of "13,000" applicants have substituted the value --12,927-- in accordance with the data concerning Example 2 in the table on page 57 of the application<sup>3)</sup>, and where the claims referenced an upper heat input level value of "16,000" applicants have substituted the value --16,322-- in accordance with the data concerning Example 1 in the table on page 57 of the application<sup>4)</sup>. Claim 9 has been rewritten in independent form and the subject matter defined in previous Claim 17 has been incorporated into Claim 9. New Claim 20 has been added to further bring out the CR granules of Claim 1 which are obtained when the lower heat input level is about 12,927 kJ/kg of coating polymer<sup>5)</sup>, and the process of Claim 14 wherein the lower heat input level is about 8282 kJ/kg of coating polymer<sup>6)</sup>. No new matter has been added.

The Examiner noted that the application lacks a cross-reference to the particulars of the international stage of this application. It is respectfully submitted that such a cross-reference is deemed to be superfluous. The respective data will appear on the face of any publication of the application, when published, as well as any patent granted on the application. A repetition of those data at the outset of the specification, therefore, does not serve any purpose. It is also respectfully noted that a cross-reference to the particulars of

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1) Cf. Claim 1.

2) Cf. Claims 1 and 18.

3) Cf. Claims 16 and 19.

4) Cf. Claim 14.

5) Cf. the data provided for Example 2 in the table on page 57 of the application.

6) Cf. the data provided for Example 4 in the table on page 57 of the application.

the international stage of this application is not necessary by law<sup>7)</sup> and cannot be regarded as being equivalent to a cross-reference in an application filed pursuant to the provisions of 35 U.S.C. §120 which are applicable when the benefit of the filing date of an earlier filed U.S. application is claimed.

The Examiner reiterated the restriction requirement and applicants have, accordingly, canceled the non-elected claims. Withdrawal of the Examiner's restriction requirement is, therefore, respectfully solicited.

The Examiner rejected Claims 1, 2, 8 to 10 and 17 under 35 U.S.C. §112, ¶2, as being indefinite for referring to an "adjustable" heat input level. Applicants have, where necessary, replaced the wording "*a defined heat input adjustable to about ... to ... kJ/kg of coating polymer*" by --a defined heat input of about ... to ... kJ/kg of coating polymer--. The Examiner also stated in this context "*it is not clear when 12,000, when 25,000 is the limit unless one can not determine the difference between 12K and 25K*"<sup>8)</sup>. The respective statement is not understood. The unit in which the heat input level is defined is kilo Joule per kilogram of coating polymer and applicants see no connection between the heat input levels referenced in the claims and the difference between 12 Kelvin and 25 Kelvin. In light of the foregoing and the attached, it is respectfully requested that the respective rejection of Claims 1, 2, 8 to 10 and 17 under Section 112, ¶2, be withdrawn. Favorable action is solicited.

The Examiner rejected Claims 9, 16 and 17 under 35 U.S.C. §112, ¶2, as being indefinite in light of the wording "*optionally additives in a fluidized bed*" in Claim 9. Applicants' revision of Claim 9 removes the unclarity, and withdrawal of the respective rejection under Section 112, ¶2, is respectfully solicited.

The Examiner rejected Claims 1, 2, 8 to 10 and 13 to 19 under 35 U.S.C. §112, ¶1, arguing that the claims recite subject matter which was not sufficiently described in the application as filed. More particularly, the Examiner asserts that the application as filed fails to support heat input values other than 6000 to 25,000 kJ/kg of coating polymer. It is respectfully submitted that further heat input values are set forth in Table 14b on page 57 of the application as

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7) Note the provisions of PCT Article 27 and PCT Rule 5.

8) Cf. page 2, lines 13 to 15, of the Office action.

filed. It is therefore respectfully requested that the rejection under Section 112, ¶1, be withdrawn. Favorable action is solicited.

The Examiner remarked that it would be valuable to provide "the report as declaration"<sup>9)</sup>. It is respectfully requested that the Examiner clarify which report is meant in this context. The Test Report which was submitted with applicants' reply dated October 21, 2003, was subsequently presented by applicants as a declaration<sup>10)</sup>.

The Examiner maintained the rejection of Claims 1, 2, 8 to 10, 13, 14 and 17 under 35 U.S.C. §102(b) as being anticipated by the teaching of *Saur et al.* (CA 2,178,655) for the reasons of record taking the position that *Saur et al.* show the compositions referenced in applicants' claims.

Anticipation under Section 102 can be found only if a reference shows exactly what is claimed<sup>11)</sup>, which means that the identical subject matter has to be shown in the reference in as complete detail as is contained in the claim<sup>12)</sup>, and that a generic disclosure is not sufficient to anticipate each species or subgenus which happens to fall within its realm<sup>13)</sup>.

The teaching of *Saur et al.* relates to granules or pellets which are adapted for a controlled release of crop protection agents by providing the granules or pellets with a coating of an ethylene copolymer wax<sup>14)</sup>. According to the teaching of *Saur et al.*, the granules or pellets are obtained by applying one or more active compounds to a solid carrier in a fluidized bed apparatus or in drums or rotary disks at a temperature of from 10 to 110°C<sup>15)</sup>, subsequently coating the active-ingredient-containing carrier with the wax in a fluidized

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9) Cf. page 2, line 16, of the Office action.

10) Cf. applicants' reply dated April 21, 2004.

11) Cf. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (CAFC 1985); *In re Marshall* 577 F.2d 301, 198 USPQ 344 (CCPA 1978); *In re Kalm* 378 F.2d 959, 154 USPQ 10 (CCPA 1967).

12) Cf. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (CAFC 1989); *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (CAFC 1984).

13) Note in particular *Corning Glass Works v. Sumitomo Electric U.S.A.*, 868 F.2d 1251, 9 USPQ2d 1962 (CAFC 1989), and *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (CAFC 1992), which emphasize that a genus does not inherently disclose all species; and also *In re Jones*, 958 F.3d 347, 21 USPQ2d 1614 (CAFC 1992), and *In re Baird*, 16 F.3d 380, 29 USPQ2d 1550 (CAFC 1994), which point out that a genus does not even render all species that happen to fall within the genus obvious.

14) Cf. page 1, indicated lines 7 to 38, of CA 2,178,655.

15) Cf. page 5, indicated lines 22 to 36, of CA 2,178,655.

bed apparatus or in drums or rotary disks at a temperature of from 10 to 110°C<sup>16</sup>). In addition to the generic description of the coating conditions, *Saur et al.* disclose examples in which a coating polymer wax is applied to active-ingredient-containing carrier particles in a fluidized bed apparatus at air inlet and outlet temperatures of from about 40 to about 50°C<sup>17</sup>).

Applicants' invention relates to controlled release granules having a polymer coating which is applied to the carrier in a fluidized bed with a defined heat input of from about 11,864 to 25,000 kJ/kg of coating polymer<sup>18</sup>), the respective heat input ( $Q_{pol}$ ) being defined by the formula<sup>19</sup>)

$$Q_{pol} = \Delta T \times V \times t \times C_p / m_{pol}$$

wherein

$\Delta T$  is the temperature difference between the inlet air temperature and the outlet air temperature,

$V$  is the gas volume flow,

$t$  is the total residence time of the sample,

$C_p$  is the gas constant, and

$m_{pol}$  is the amount of polymer in the batch.

More particularly, applicants have found that the heat input which is employed when the coating polymer is applied to the carrier granules has a distinct impact on the rate at which the active ingredient is released from the controlled release granules.

The teaching of *Saur et al.* does not provide generic or specific information which concerns the gas volume flow. The teaching of *Saur et al.* therefore fails to suggest to a person of ordinary skill in the art that the heat input per kg of coating polymer is of essence, and also fails to imply heat input values within any particular range. Moreover, based on the information which is provided by the teaching of *Saur et al.* it is not even possible to estimate or calculate the heat input in kJ/kg of coating polymer which was employed in the examples described by *Saur et al.* As such, the teaching of *Saur et al.* cannot be deemed to identically show the subject matter which is defined in applicants' claims in as complete detail as is con-

16) Cf. page 5, indicated line 38 et seq., in conjunction with page 7, indicated lines 4 to 31, of CA 2,178,655.

17) Cf. examples 1 to 16, pages 10 to 13, and Example 31, page 14, of CA 2,178,655.

18) Cf. Claim 1.

19) Cf. page 57, indicated lines 15 to 25, of the application.

tained in the claim as is necessary for a finding of anticipation under Section 102. Also, as seen from the above definition of the heat input ( $Q_{pol}$ ), the gas volume flow is directly proportional to the heat input value. Accordingly, if the gas volume flow is altered, for example, from 280 m<sup>3</sup>/h to 400 m<sup>3</sup>/h, corresponding to an increase by a factor of 1.43, the heat input value increases correspondingly<sup>20)</sup>. That means that coating conditions which provide for a heat input value of 10,000 kJ/kg of coating polymer when the gas flow volume is 280 m<sup>3</sup>/h provide for a heat input value of 14,300 kJ/kg of coating polymer when the gas flow value is increased to 400 m<sup>3</sup>/h. It is immediately apparent from this calculation, that not all coating procedures which are conducted in a fluidized bed apparatus at a temperature of from 10 to 110°C inherently provide for conditions where the heat input is within the limits of from about 11,864 to 25,000 kJ/kg of coating polymer as required in accordance with applicants' invention.

The Examiner also criticized Dr. Stadler's Declaration for not addressing the heat application of 110°C which is disclosed by *Saur et al.* as upper temperature limit for the preparation of coated granules. It is respectfully noted that the heat input  $Q_{pol}$  correlates to a temperature difference,  $\Delta T$ , between the air inlet temperature and the air outlet temperature and not to the temperature at which the coating procedure itself is conducted. It is therefore of subsidiary impact on the heat input value whether the coating process is conducted at a temperature in the fluidized bed of 10°C or at a bed temperature of 110°C. Also, and as mentioned at the outset, it is well settled that a generic range is not an anticipating disclosure of each and every value which happens to fall within its realm<sup>21)</sup>.

A person of ordinary skill in the art cannot reasonably arrive at the coating conditions which are required in accordance with applicants' invention by merely selecting a bed temperature from the range of from 10 to 110°C mentioned by *Saur et al.* Rather, to arrive at the coating conditions which are required in accordance with applicants' invention, such a person has to adjust

- (1) the temperature difference between the inlet air temperature and the outlet air temperature,

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20) Cf. applicants' comparative Example 2, page 37, indicated line 43, to page 38, indicated line 17, of the application, and applicants' representative Example 3, page 39, indicated line 17, to page 14, of the application.

21) Cf. fn. 13 on page 4 of this paper.

(2) the gas volume flow, and  
(3) the total residence time of the sample,  
in relation to the amount of polymer which is employed in the batch  
in order to arrive at coating conditions which provide for a heat  
input within the range defined in applicants' claims.

In light of the foregoing and the arguments already presented by  
applicants' in their previous replies it is therefore respectfully  
requested that the rejection of Claims 1, 2, 8 to 10, 13, 14 and 17  
under Section 102(b) based on the teaching of *Saur et al.* be with-  
drawn. Favorable action is respectfully solicited.

Please charge any shortage in fees due in connection with the  
filing of this paper, including Extension of Time fees, to Deposit  
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Respectfully submitted,

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Encl.: THE LISTING OF CLAIMS (Appendix I)

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